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**Notice of Allowability**

Application No.

10/624,669

Examiner

Wasseem H Hamdan

Applicant(s)

YAMAGUCHI ET AL.

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**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--**

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to 07/23/2003.
2. ☒ The allowed claim(s) is/are 1-15.
3. ☒ The drawings filed on 23 July 2003 are accepted by the Examiner.
4. ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
  - a) ☒ All    b) ☐ Some\*    c) ☐ None    of the:
    1. ☒ Certified copies of the priority documents have been received.
    2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
    3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).
  - \* Certified copies not received: \_\_\_\_\_.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.  
**THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.**

5. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
6. ☐ CORRECTED DRAWINGS ( as "replacement sheets") must be submitted.
  - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review ( PTO-948) attached
    - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date \_\_\_\_\_.
  - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date \_\_\_\_\_.

Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
7. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

**Attachment(s)**

1. ☒ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☒ Information Disclosure Statements (PTO-1449 or PTO/SB/08),  
Paper No./Mail Date 06/14/04; 02/02/04
4. ☐ Examiner's Comment Regarding Requirement for Deposit  
of Biological Material
5. ☐ Notice of Informal Patent Application (PTO-152)
6. ☐ Interview Summary (PTO-413),  
Paper No./Mail Date \_\_\_\_\_
7. ☒ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other \_\_\_\_\_

**DETAILED ACTION**

**EXAMINER'S AMENDMENT**

1. This application is in condition for allowance except for the presence of claims 17-30 non-elected with traverse. Accordingly, claims 17-30 have been cancelled.
2. An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with John P. Darling (Registration No. 44,482) on 12/02/2004.

The application has been amended as follows:

- a. Cancel claims 17-30; and
- b. Cancel claim 16.

***Examiner's Statement Of Reason For Allowance***

3. The following is an examiner's statement of reasons for allowance:

Claims 1-15 are allowable.

Regarding claim 1, the prior art of records does not teach all the combined steps for a method of an image processing method of creating composite image information by embedding sub-information in main image information including the steps of performing embedding processing of creating composite image information by embedding sub-information the main image information; and

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performing transformation processing inverse to the transformation processing in the second pre-processing for the composite image information created by the embedding processing.

Regarding claim 2, the prior art of records does not teach all the combined steps for a method of an image processing method of recording, on a recording medium in a visible state, composite image information created by embedding sub-information in visible main image information in an invisible state including the steps of performing embedding processing of creating composite image information by embedding sub-information in the main image information having undergone the second pre-processing in an invisible state; performing transformation processing inverse to the transformation processing the second pre-processing for the composite image information created by the embedding processing; and transformation processing,

performing an alternate driving/recording scheme of alternately recording even-numbered and odd-numbered pixels in a main scanning direction of a recording device on a recording line basis.

Regarding claim 13 the prior art of records does not teach all the combined steps for a method of an image processing method of recording, on a recording medium in a visible state, composite image information created by embedding sub-information in visible main image information in an invisible state, including the steps of performing embedding processing of embedding the sub-information in the main image information having undergone the second pre-

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processing in an invisible state by performing color difference modulation processing using main image information, the sub-information, and key information used restore sub-information, thereby creating composite image information;

performing inverse transformation processing of performing transformation processing inverse transformation processing in the second pre-processing the composite image information after expanding and reconstructing an effective portion the composite image information by inserting, composite image information, not-to-be-recorded information the thinned-out portion of the main corresponding image information; and

performing an alternate driving/recording scheme of alternately recording even-numbered and odd-numbered pixels in a main scanning direction of a recording device on a recording line basis.

Regarding claim 15 the prior art of records does not teach all the combined steps for a method of an image processing method of recording, on a recording medium in a visible state, composite image information created by embedding sub-information in visible main image information in an invisible state, including the steps of processing of embedding the sub-information in main image information in an invisible state by superimposing the main image performing embedding information and superimposition information created by performing color difference modulation processing using the sub-information and key information used restore the sub-information, thereby creating composite image information;

performing inverse transformation processing performing transformation processing inverse transformation processing the second pre-processing the composite image information

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after expanding and reconstructing an effective portion of composite image information by inserting the composite image information, not-to-be-recorded information corresponding to the thinned-out portion of the main image information; and

performing an alternate driving/recording scheme of alternately recording even-numbered and odd-numbered pixels in a main scanning direction of a recording device on a recording line basis.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

### ***Conclusion***

4. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. The prior art of records does not teach all the combined steps as discussed above in the "examiner's statement of reasons for allowance".

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Wasseem H Hamdan whose telephone number is (571) 272-2166. The examiner can normally be reached on M-F (first Friday off) 6:30 AM- 4:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Andrew H Hirshfeld can be reached on (571) 272-2168. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.


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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



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December 7, 2004



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